



Technical Data Sheet

DOWSIL™ 787 Glass & Metal Silicone Sealant

Acetoxy Silicone Sealant

Features & Benefits

- Excellent adhesion to a variety of non-porous substrates
- High strength and good elasticity
- 100% silicone polymer
- Solvent-free
- Conforms to ISO 11600-G-20LM
- Resistant to ozone and ultra-violet radiation

Applications

- DOWSIL™ 787 Glass & Metal Silicone Sealant is a one-part moisture curing acetoxy silicone suitable for use across a broad range of applications. It combines a high strength and good elasticity with excellent adhesion to a variety of non-porous substrates such as glass, glazed ceramic tiles and aluminum. DOWSIL™ 787 Silicone Sealant offers excellent resistance to aging, shrinkage, cracking and discoloring.

Typical Properties

Specification Writers: These values are not intended for use in preparing specifications.

Test ¹	Property	Unit	Result
	Cure system		Acetoxy
	Application temperature	°C	+5 to +40
		°F	+41 to +104
CTM97B	Specific gravity		1.02
CTM364C	Extrusion rate	g/minute	210
CTM98B	Skin over time at 23°C (73°F) and 50% R.H.	minutes	14
	Tack-free time 23°C (73°F), 50% R.H.	minutes	220
CTM663A	Cure rate 23°C (73°F), 50% R.H.		
	1 day	mm	3
	3 days	mm	5
	2 mm thickness S2 dumb-bells (ISO 37IDIN 53 504)		
	E-Modulus 100%	MPa	0.4–0.5
CTM137A	Tensile strength	MPa	1.8
CTM137A	Elongation at break	%	520

1. CTM: Corporate Test Method, copies of CTMs are available on request.
ISO: International Standardisation Organisation.

Typical Properties (Cont.)

Test	Property	Unit	Result
CTM137A	12 x 12 x 50 mm size T.A. joint (ISO 8339/DIN2-8339)		
	E-Modulus 100%	MPa	0.4–0.5
CTM677	Tensile strength	MPa	0.60
CTM677	Elongation at break	%	190
CTM99E	Hardness (Shore A)		22
ISO7389	Elastic recovery	%	> 90
ISO9047	Joint movement capability	%	± 20

Technical Specifications and Standards

Conforms to ISO 11600-G-20LM.

How to Use

Surface preparation

Ensure that all surfaces are clean, dry, sound and free from frost. Clean all joints of release agents, water repellents, laitance, dust, dirt, old sealants and other contaminants which could impair adhesion. Surfaces should be cleaned and degreased by wiping with a suitable solvent, such as DOWSIL™ R-40 Universal Cleaner on an oil and lint-free cloth before application of sealant.

Note: When using any solvent, always provide adequate ventilation. Avoid heat, sparks and open flames. Use solvent resistant gloves. Observe and follow all precautions listed on solvent container label.

Masking

Areas adjacent to the joints should be masked with tape to prevent contamination of the substrates and to ensure a neat sealant line. Masking tape should be removed immediately after tooling.

Priming

Adhesion to plastic and metal surfaces can be improved by using DOWSIL™ 1200 OS Primer.

Back-Up Materials

Closed cell polyethylene backer rod is recommended as a back-up material to provide back pressure and avoid three sided adhesion that limits sealant movement capability. Low tack polyethylene tape should be used in joints too shallow to allow the use of backer rod.

How to Use (Cont.)

Finishing

The joint should be tooled within 5 minutes of application to ensure good contact between the sealant and the substrate. Tooling of the sealant also gives a smooth, professional finish.

Clean-Up

Excess sealant may be cleaned off tools and non-porous surfaces whilst in an uncured state using DOWSIL™ R-40 Universal Cleaner. If sealant is misapplied to porous substrates, it should be left until just cured, and then removed by peeling, cutting or other mechanical means. Care should be taken not to damage plastic or coated surfaces.

Joint Design

The sealant joint width should be designed to accommodate the movement capability of the sealant. When designing joints using DOWSIL™ 787 Silicone Sealant, the minimum width should be 6 mm. For joints between 6–12 mm wide, a seal depth of 6mm is required. For joints above 12 mm wide, a width to depth ratio of 2: 1 should be used. For joint dimensions greater than 25 mm, please contact your Dow Business Developer. In situations where fillet joints are needed, a minimum of 6 mm sealant bite to each substrate is recommended.

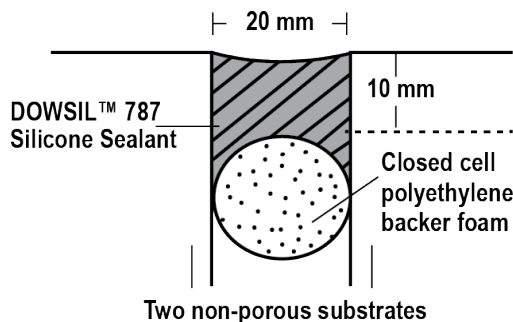


Figure 1: Deep joint

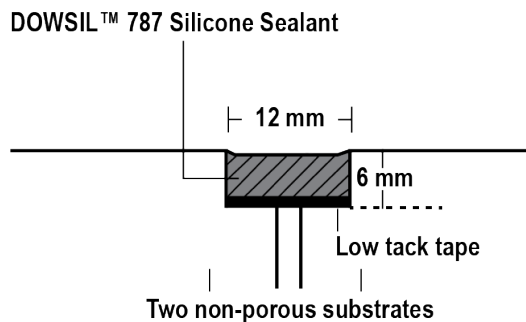


Figure 2: Shallow joint

How to Use (Cont.)

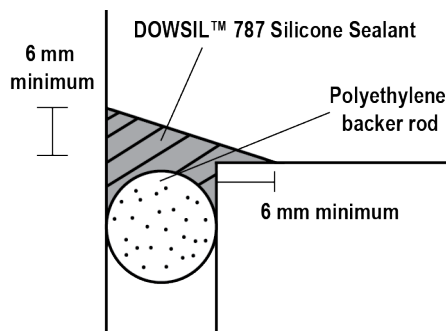


Figure 3: Fillet joint

Handling Precautions

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING, READ PRODUCT AND SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE SAFETY DATA SHEET IS AVAILABLE ON THE DOW WEBSITE AT DOW.COM, OR FROM YOUR DOW SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CUSTOMER SERVICE.

Usable Life and Storage

DOWSIL™ 787 Silicone Sealant should be stored in cool and dry conditions.

When stored at or below 30°C (86°F) in the original unopened containers, DOWSIL™ 787 Silicone Sealant has a usable life of 24 months from the date of production.

Limitations

DOWSIL™ 787 Glass & Metal Silicone Sealant is not recommended for use on porous substrates, such as concrete, stone, marble or granite.

Do not use DOWSIL™ 787 Silicone Sealant on bituminous substrates, substrates based on natural rubber, chloroprene or EPDM or on building materials which might bleed oils, plasticisers or solvents. Do not use DOWSIL™ 787 Silicone Sealant in a totally confined space because the sealant requires atmospheric moisture to cure. Because acetic acid is released during curing, it can corrode mirror silver and sensitive metals such as copper, brass and lead. DOWSIL™ 787 Silicone Sealant is not recommended for use on submerged joints or in joints where physical abuse or abrasion is likely to occur.

DOWSIL™ 787 Silicone Sealant is not suitable for food contact applications.

DOWSIL™ 787 Silicone Sealant is not recommended for structural glazing or insulated glazing applications.

It is recommended that DOWSIL™ 787 Silicone Sealant is not applied to surfaces that are below 5°C (41°F) as it is impossible to guarantee a dry surface at these temperatures.

This product is neither tested nor represented as suitable for medical or pharmaceutical uses.

Health and Environmental Information

To support customers in their product safety needs, Dow has an extensive Product Stewardship organization and a team of product safety and regulatory compliance specialists available in each area.

For further information, please see our website, dow.com or consult your local Dow representative.

dow.com

LIMITED WARRANTY INFORMATION – PLEASE READ CAREFULLY

The information contained herein is offered in good faith and is believed to be accurate. However, because conditions and methods of use of our products are beyond our control, this information should not be used in substitution for customer's tests to ensure that our products are safe, effective, and fully satisfactory for the intended end use. Suggestions of use shall not be taken as inducements to infringe any patent.

Dow's sole warranty is that our products will meet the sales specifications in effect at the time of shipment.

Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted.

TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, DOW SPECIFICALLY DISCLAIMS ANY OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY.

DOW DISCLAIMS LIABILITY FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES.

